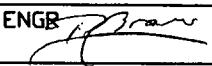
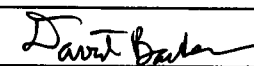
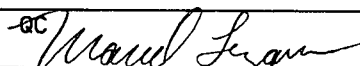


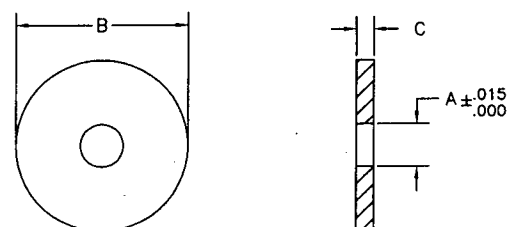
APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03197					SHEET 1 OF 1	
	DWG NO. 41228-000-004		REV: D	PREPARED BY J. GARDINER	DATE: 08/16/11		EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC.
	DWG TITLE: FUEL TANK INSTALLATION						
APPROVED BY: ENGR 		MFG 		QC 		EFF: CURRENT ORDER	
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REVISE F/N 47 FROM MS20426-4M4 TO 601.3359.					

47	R	601.3359	12	12	12	12	12	12	12	12	RIVET	MS20613C4-4		
F/N	TC	PART NUMBER	-015	-013	-011	-009	-007	-005	-003	-001	DESCRIPTION	MATERIAL	SPECIFICATION	
			QTY											
DOCUMENTS EFFECTED:											CHANGE CATEGORY		DER REVIEW REQUIRED	
<input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRUC <input type="checkbox"/> ICA <input checked="" type="checkbox"/> BOM											<input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

1 2 3 4 5 6 7 8

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INCORPORATED E.D.'S A-2 & A-3. CHANGED TO FIND NO. SYSTEM. ADDED -.003, -.005, & -.007 INST. FOR APPLICABLE MODEL A/C. CHANGED NEXT ASSY	12-11-95	D. MARWILL
B	CHG. QTY. OF ITEM 18, 43 & 44; CHG. P/N OF ITEM 19 & 35; REVISED SHIM NOTES ON DETAILS A, B, E & H; CORRECTED ITEM NO'S ON DETAIL C.	02-20-98	D. MARWILL
C	ADDED -.009, -.001, -.012A, -.013 & -.015 INSTALLATIONS; ADDED ITEMS 8A, 8B, 8C, 8D, 9A, 10A, 11A, 12A, 19A, 20A & 20B TO L/H; ADDED ITEM 59 TO L/H & F/D. MAJOR CHANGE - FAR 21.97 (G)	01-14-03	D. MARWILL
D	INCORPORATED ECN 01831, 01851, 01898 & 03010	12-02-10	P. BRAVDOY



P/N	DIA. A	DIA. B	C
41228-202-132-001	.312	1.000	.100
41228-202-132-003	.312	1.000	.063
41228-202-132-005	.312	1.000	.032
41228-202-132-007	.312	1.000	.016
41228-202-132-009	.250	1.000	.100
41228-202-132-011	.250	1.000	.063
41228-202-132-013	.250	1.000	.032
41228-202-132-015	.250	1.000	.016

UNINCORPORATED ECN(S)

03197

1	1	1	1	1	1	1	1	1	14	41228-305-005-002	R/H AFT LUG CAVITY INSTALLATION	
1	1	1	1	1	1	1	1	1	13	41228-305-005-001	L/H AFT LUG CAVITY INSTALLATION	
		1					1		12A	41228-301-066-003	FUEL RETURN CAVITY INSTALLATION	
1	1		1	1	1			1	12	41228-301-066-001	FUEL RETURN CAVITY INSTALLATION	
				1	1	1	1	1	11A	41228-301-064-003	CROSS FEED INSTALLATION	
				1	1	1	1	1	11	41228-301-064-001	CROSS FEED INSTALLATION	
1	1	1	1						10A	41228-200-006-002	R/H TANK ASSY	△8
1	1	1	1						9A	41228-200-006-001	L/H TANK ASSY	
				1	1	1	1	1	10	41228-200-005-002	R/H TANK ASSY	
				1	1	1	1	1	9	41228-200-005-001	L/H TANK ASSY	
		1							8D	41228-300-009-001	FUEL SYS. INSTL.	△7
1									8C	41228-300-008-005	FUEL SYS. INSTL.	△6
	1								8B	41228-300-008-003	FUEL SYS. INSTL.	△5
			1						8A	41228-300-008-001	FUEL SYS. INSTL.	△4
						1			8	41228-300-007-001	FUEL SYS. INSTL.	△7
				1					7	41228-300-006-005	FUEL SYS. INSTL.	△6
					1				6	41228-300-006-003	FUEL SYS. INSTL.	△5
							1		5	41228-300-006-001	FUEL SYS. INSTL.	△4
										-015	BELL 205A-A1	
										-013	BELL 212	
										-011	BELL 412 S/N 33108 & SUB	
										-009	BELL 412 S/N 33001-33107	
										-007	BELL 205A-A1	
										-005	BELL 212	
										-003	BELL 412 S/N 33108 & SUB	
										-001	BELL 412 S/N 33001-33107	
-015	-013	-011	-009	-007	-005	-003	-001	FIND No.	PART No.	DESCRIPTION	MAT'L	SPEC

- △ CENTER CONSOLE MOUNTING OPTION P/N 41228-600-009-005 28V
(ITEM #'S 9 & 10 S/N 115 & SUB.)
△ BELL 412 S/N 33108 & SUB
△ BELL 205A-A1
△ BELL 212
△ BELL 412 S/N 33001-33107
C: MATING PARTS OF THE CONNECTION SHALL BE LESS THAN 1 OHM WHEN DRY. REF. MIL-B-5087B PARA 3.3.6.
B: APPLY A CONVERSION COATING PER MIL-C-5541E CLASS 1A ON EXPOSED AREA.
△ A: WIRE BRUSH EACH SIDE OF A/C HARD POINTS AT UPPER STA'S 84.5, 129.0 & 155.06 & LOWER STA'S 84.5 & 155.06.
△

- △ ESTABLISH ELECTRICAL BONDING PER MIL-B-5087B CLASS L PARA 3.3.4.3 AND CLASS R PARA 3.3.5.1.
C: ADDITIONAL SHIMS MAY BE ADDED TO OUTSIDE OF HARD POINTS TO PROVIDE PROPER THREAD CLEARANCE FOR MS20365-428 NUT.
B: ROTATE TANK UNDER HELICOPTER AND PUSH TANK ASSEMBLY AFT TO STRIKE THE UPPER LUGS AT STA. 84.5, 129.0 & 155.06 IF A GAP BETWEEN THE TANK LUG AND HARD POINT EXCEED .016 SHIM THE GAP WITH SHIMS SELECTED FROM TABLE 1 SHOWN ABOVE.
△ A: TEMPORARILY INSTALL NAS1304 BOLT AT STA. 129 & AN4-16A AT STA. 155 UPPER LUGS ONLY.

NOTES:

QTY REQ'D		PARTS LIST	
NEXT ASSY(S)		ORIGINAL DATE (MO-DA-YR)	04-20-95
41228-000-002		DRAWN BY	T. HARVILLE
		CHECKER	
		DRAWING APPROVAL	
		CONTRACT No.	
		UNLESS OTHERWISE SPECIFIED	
		DIMENSIONS ARE IN INCHES	
		TOLERANCES ON:	
		2 PLACE DECIMALS ± .03	
		3 PLACE DECIMALS ± .010	
		ANGLES ± .5°	
SIZE	CAGE CODE	DWG. No.	REV
B	07M26	41228-000-004	D
SCALE	NONE	SHEET 1 of 6	

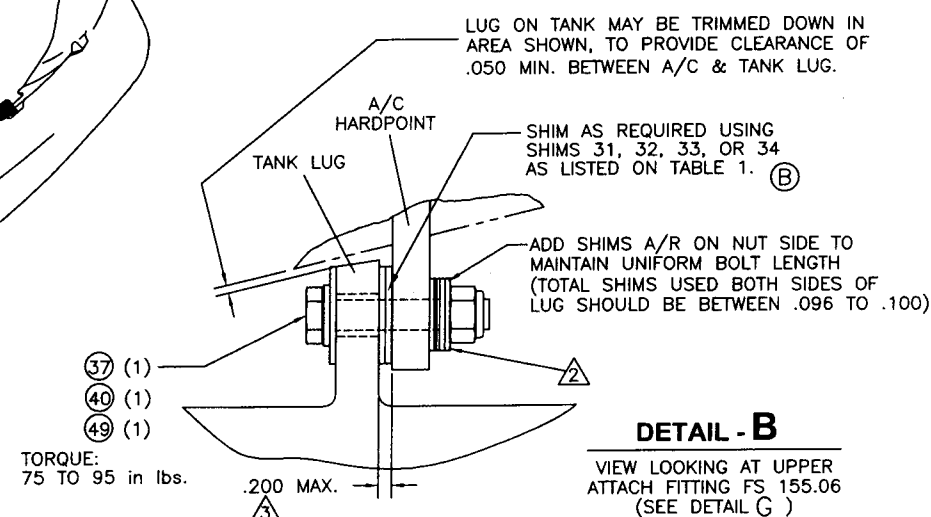
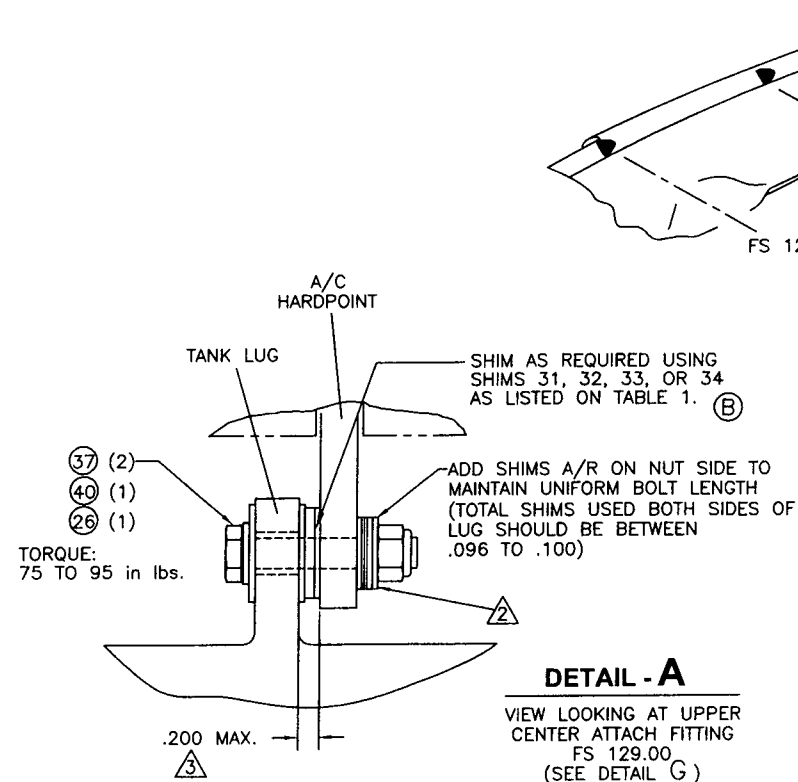
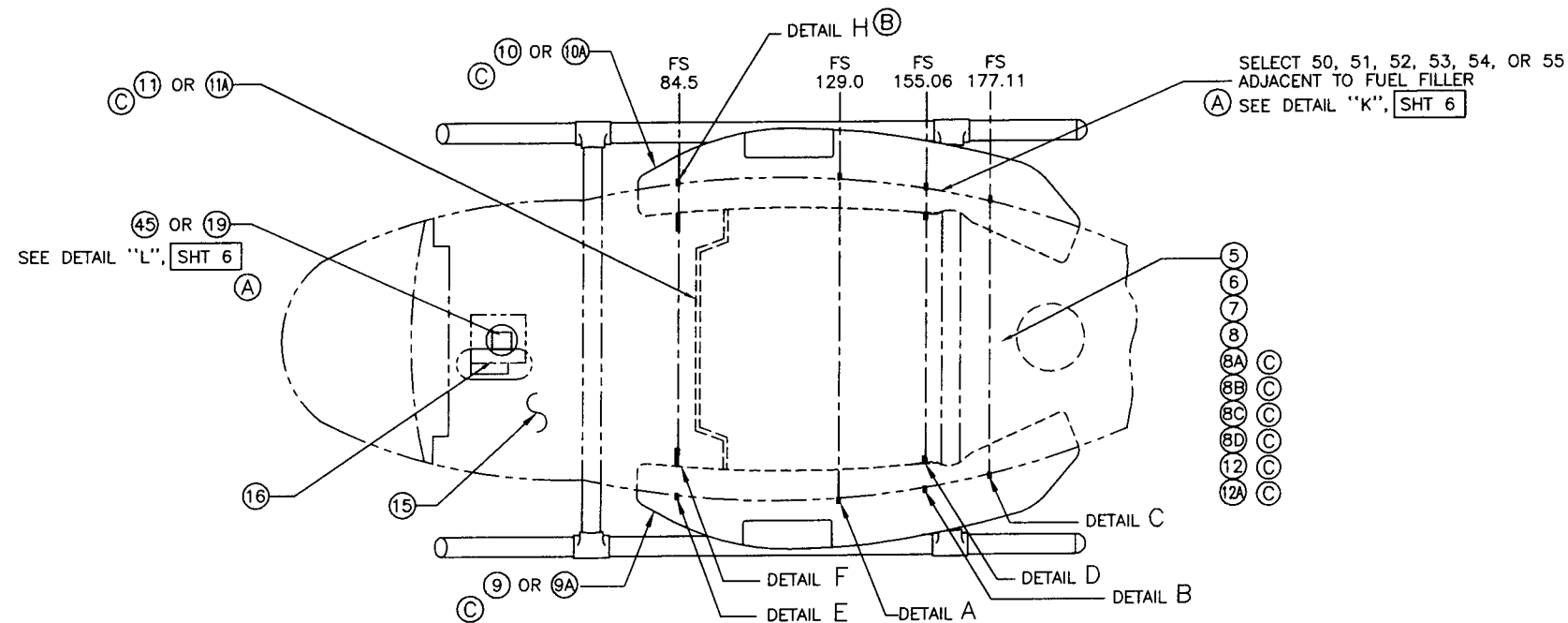
1 2 3 4 5 6 7 8

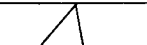
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF
APICAL INDUSTRIES ANY REPRODUCTION IN PART OR WHOLE WITHOUT
THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

		2	2		2	2	59	41228-700-011-001	GROUNDING BRACKET ASSY			
	1				1		58	41228-301-001-011	DECAL			
1				1			57	41228-301-001-010	DECAL			
		1	1			1	56	41228-301-001-009	DECAL			
1	1			1	1		55	41228-301-001-008	DECAL			
1	1			1	1		54	41228-301-001-007	DECAL			
		1				1	53	41228-301-001-004	DECAL			
		1				1	52	41228-301-001-003	DECAL			
			1			1	51	41228-301-001-002	DECAL			
			1			1	50	41228-301-001-001	DECAL			
2	2	2	2	2	2	2	49	601.1989	BOLT	AN4-16A		
2	2	2	2	2	2	2	48	AN5-13A	BOLT			
12	12	12	12	12	12	12	47	MS20426-4M4	RIVET			
							46	DELETED				
								-015	BELL 205A-A1			
								-013	BELL 212			
								-011	BELL 412 S/N 33108 & SUB			
								-009	BELL 412 S/N 33001-33107			
								-007	BELL 205A-A1			
								-005	BELL 212			
								-003	BELL 412 S/N 33108 & SUB			
								-001	BELL 412 S/N 33001-33107			
-015	-013	-011	-009	-007	-005	-003	-001	FIND No.	PART No.	DESCRIPTION	MAT'L	SPEC
QTY REQ'D								PARTS LIST				

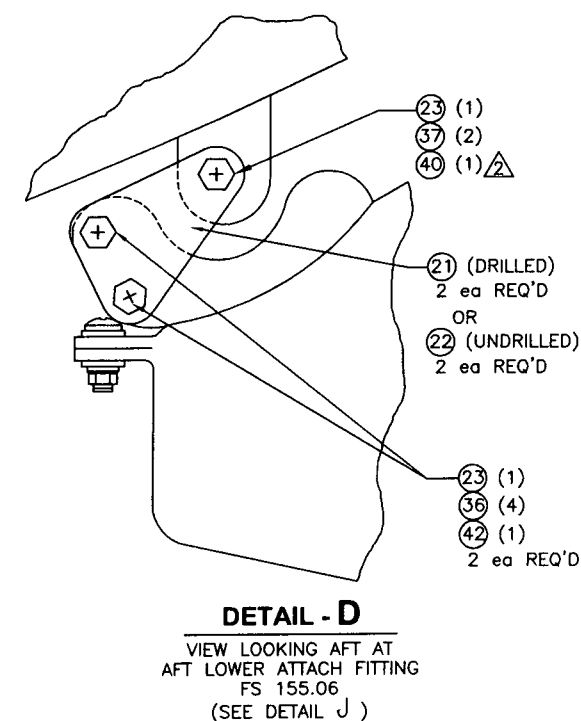
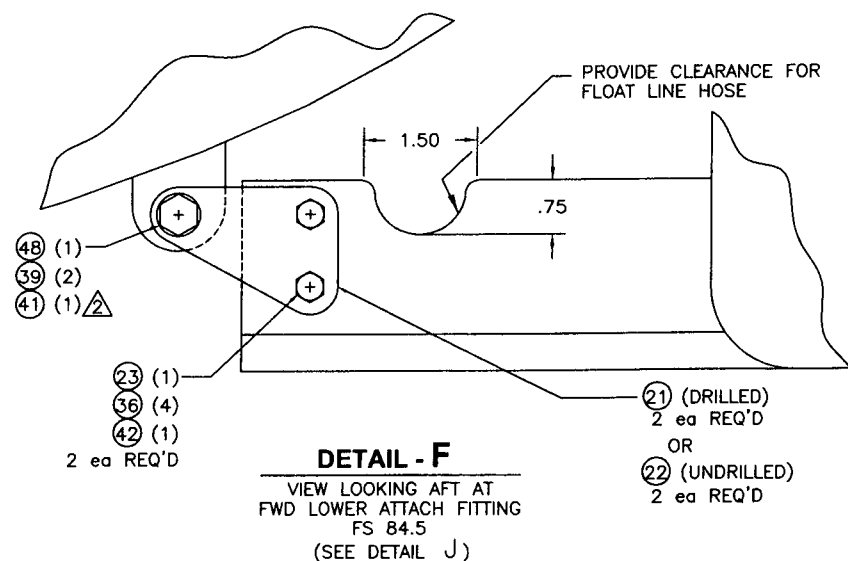
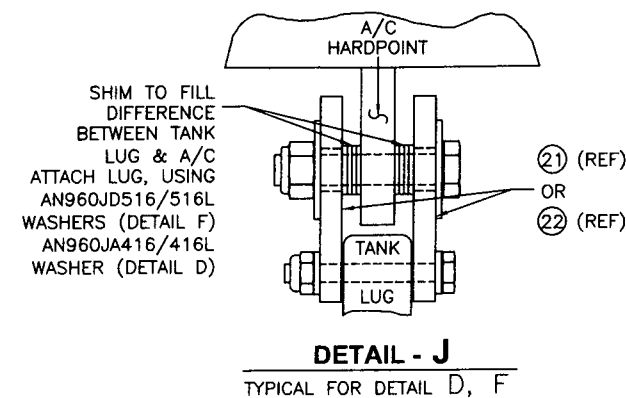
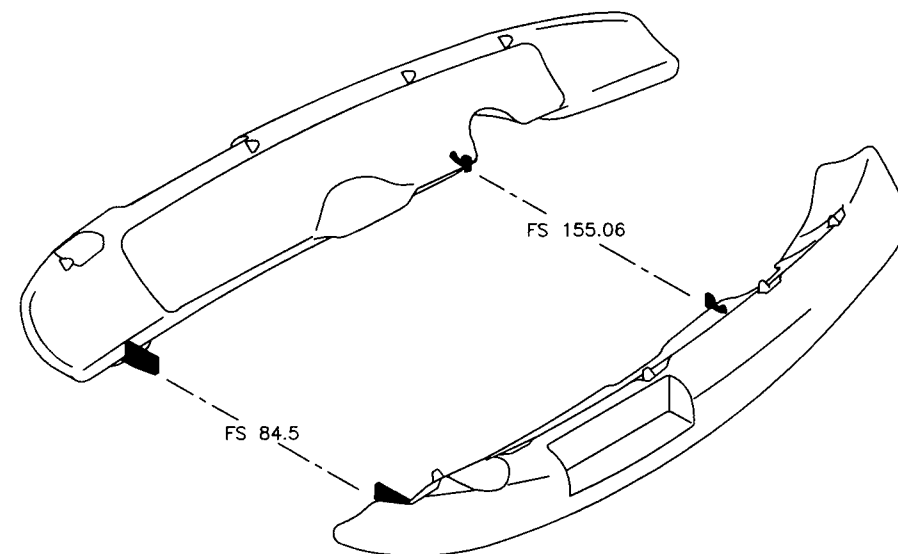
	1				1			45	41228-600-009-007	CONTROL PANEL INSTALLATION		
1	1	1	1	1	1	1	1	44	41228-305-004-002	BKT ASSY		
1	1	1	1	1	1	1	1	43	41228-305-004-001	BKT ASSY		
24	24	24	24	24	24	24	24	42	MS21044N3	NUT		
4	4	4	4	4	4	4	4	41	MS20365-524	NUT		
8	8	8	8	8	8	8	8	40	MS20365-428	NUT		
16	16	16	16	16	16	16	16	39	601.2026	WASHER	AN960PD516	
32	32	32	32	32	32	32	32	38	600.0787	WASHER	AN960-10	
36	36	36	36	36	36	36	36	37	NAS1149D0463J	WASHER		
16	16	16	16	16	16	16	16	36	601.1718	WASHER	NAS1149D0363J	
16	16	16	16	16	16	16	16	35	601.0757	BOLT	AN3C4A	
6	6	6	6	6	6	6	6	34	41228-202-132-015	SHIM		
6	6	6	6	6	6	6	6	33	41228-202-132-013	SHIM		
6	6	6	6	6	6	6	6	32	41228-202-132-011	SHIM		
6	6	6	6	6	6	6	6	31	41228-202-132-009	SHIM		
4	4	4	4	4	4	4	4	30	41228-202-132-007	SHIM		
4	4	4	4	4	4	4	4	29	41228-202-132-005	SHIM		
4	4	4	4	4	4	4	4	28	41228-202-132-003	SHIM		
4	4	4	4	4	4	4	4	27	41228-202-132-001	SHIM		
2	2	2	2	2	2	2	2	26	NAS6604-22	BOLT		
2	2	2	2	2	2	2	2	25	AN5-16A	BOLT		
2	2	2	2	2	2	2	2	24	AN4-13A	BOLT		
8	8	8	8	8	8	8	8	23	AN3-13A	BOLT		
4	4	4	4	4	4	4	4	22	41228-202-052-009	LINK		
4	4	4	4	4	4	4	4	21	41228-202-052-001	LINK		
								20B	41228-303-001-003	FLOAT SYSTEM MODIFICATION (OPTIONAL)		
REF	REF							20A	41228-303-001-001	FLOAT SYSTEM MODIFICATION (OPTIONAL)		
1		1	1	1		1	1	20	20528-301-008-003	GROUND RECEPTACLE INSTALLATION		
1				1				19A	41228-202-131-001	INSTALLATION, CONNECTOR CAVITY		
1		1	1	1		1	1	19	41228-600-009-009	CONTROL PANEL INSTALLATION		
1				1				18	41228-502-023-001	DUAL BEAD SENSOR/IMPACT SWITCH INSTALLATION		
	1	1	1		1	1	1	17	41228-502-026-001	DUAL BEAD SENSOR/IMPACT SWITCH INSTALLATION		
1	1	1	1	1	1	1	1	16	41228-500-003-001	OVERHEAD CIRCUIT BREAKER PANEL INSTALLATION		
1	1	1	1	1	1	1	1	15	41228-400-007-001	AIRFRAME WIRE ROUTING INSTALLATION		
									-015	BELL 205A-A1		
									-013	BELL 212		
									-011	BELL 412 S/N 33108 & SUB		
									-009	BELL 412 S/N 33001-33107		
									-007	BELL 205A-A1		
									-005	BELL 212		
									-003	BELL 412 S/N 33108 & SUB		
									-001	BELL 412 S/N 33001-33107		
-015	-013	-011	-009	-007	-005	-003	-001	FIND No.	PART No.	DESCRIPTION	MAT'L	SPEC
QTY REQ'D								PARTS LIST				
NEXT ASSY(S)								ORIGINAL DATE (MO-DA-YR) 04-20-95				
								DRAWN BY T. HARVILLE				
								DRAWING APPROVAL				
								CONTRACT No.				
								UNLESS OTHERWISE SPECIFIED				
								DIMENSIONS ARE IN INCHES				
								TOLERANCES ON				
								2 PLACE DECIMALS ± .03				
								3 PLACE DECIMALS ± .010				
								ANGLES ± .5°				
								APICAL INDUSTRIES, INC. 3800 TEMPLE HEIGHTS DR. GASTROVIA, OH 43025-3015 (760) 724-0300				
								FUEL TANK INSTALLATION				
								SIZE B CAGE CODE 07MZ6 DWG. No. 41228-000-004 REV D				
								SCALE NONE SHEET 2 of 6				

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



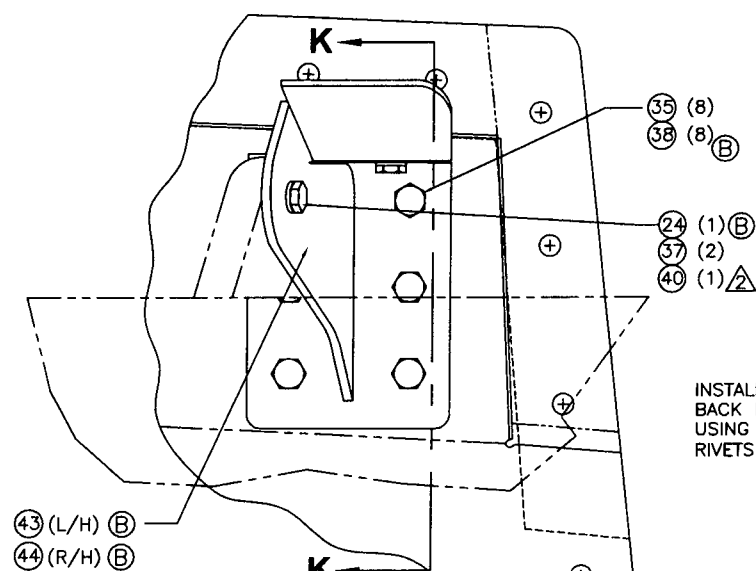
ORIGINAL DATE (MO-DA-YR)	04-20-95	 APICAL INDUSTRIES, INC. 2808 TOPPLE HEIGHTS DR. OCEANSIDE, CA 92066-3012 (760) 724-8300
DRAWN BY	CHECKER	
T. HARVILLE		
DRAWING APPROVAL		
CONTRACT No.		FUEL TANK INSTALLATION
UNLESS OTHERWISE SPECIFIED		
DIMENSIONS ARE IN INCHES		
TOLERANCES ARE:		
2 PLACE DECIMALS ± .03		
3 PLACE DECIMALS ± .010		
ANGLES ± .5°		
SIZE	CAGE CODE	DWG. No.
B	07MZ6	41228-000-004
SCALE NONE		SHEET 3 of 6

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

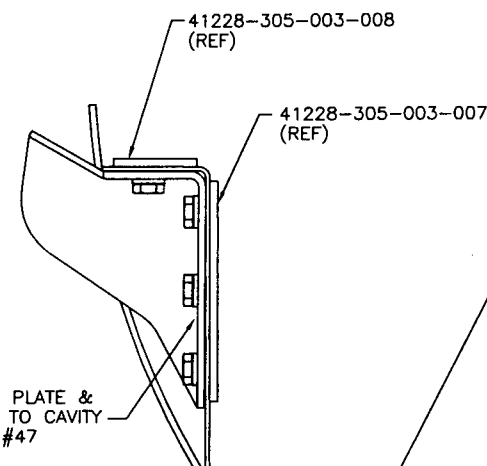


ORIGINAL DATE (MO-DA-YR)	04-20-95	<p>2808 TEMPLE HEIGHTS DR. OCEANVIEW, CA 92088-3012 (714) 724-8300</p>			
DRAWN BY	CHECKER				
T. HARVILLE		<p>FUEL TANK INSTALLATION</p>			
DRAWING APPROVAL					
CONTRACT No.		SIZE	CAGE CODE	DWG. No.	REV
		B	07MZ6	41228-000-004	D
UNLESS OTHERWISE SPECIFIED		SCALE NONE			
DIMENSIONS ARE IN INCHES		SHEET 4 of 6			
TOLERANCES ON:					
2 PLACE DECIMALS $\pm .03$					
3 PLACE DECIMALS $\pm .010$					
ANGLES $\pm .5^\circ$					

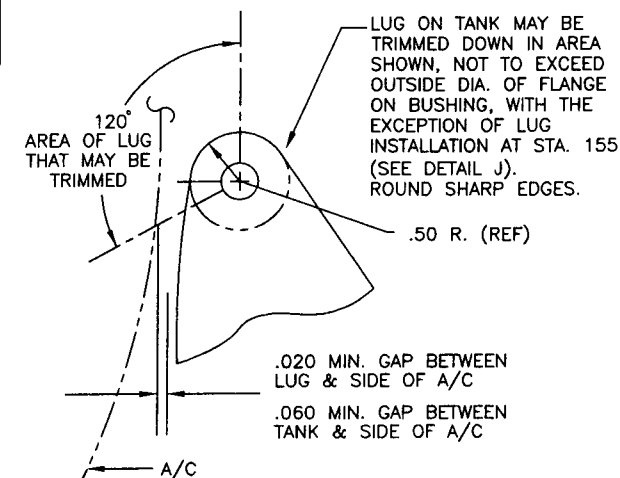
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



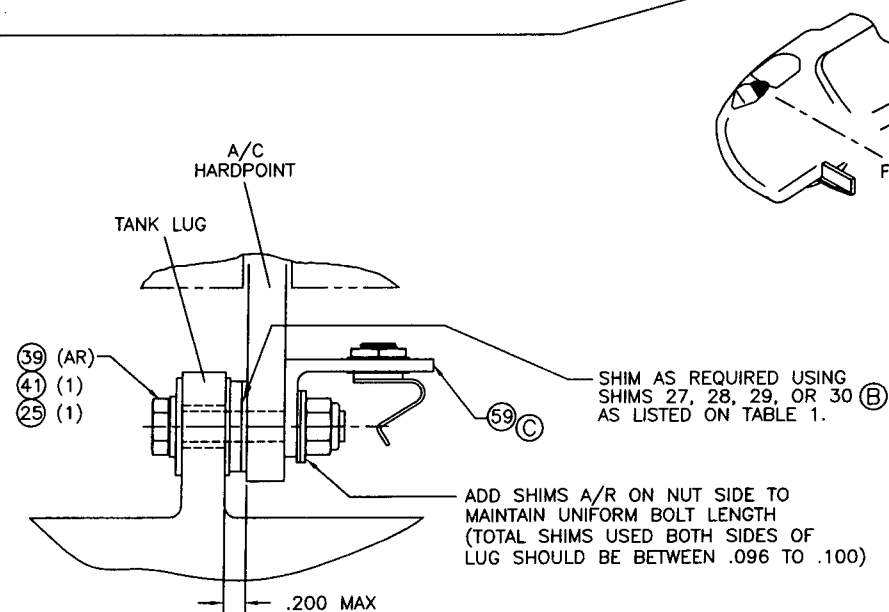
DETAIL - C
VIEW LOOKING AT AFT UPPER
ATTACH FITTING FS 177.11
(SEE DETAIL G)



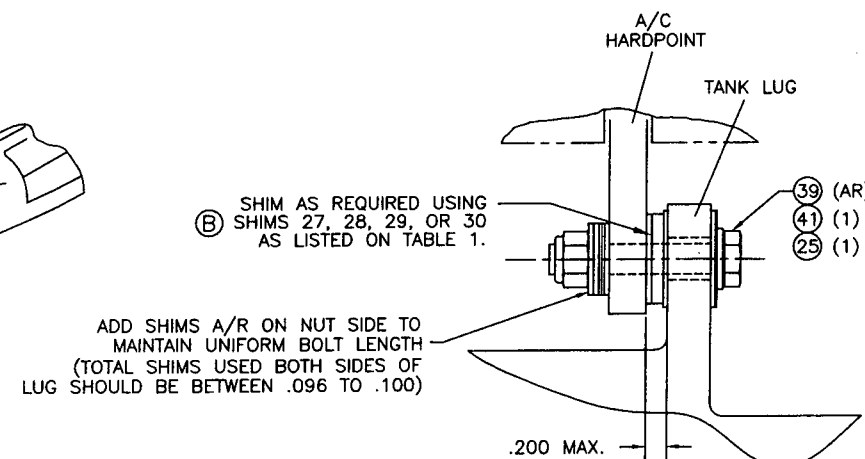
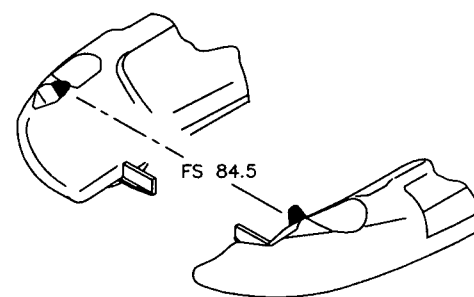
SECTION - K-K




DETAIL - G
TYPICAL FOR DETAIL E, H



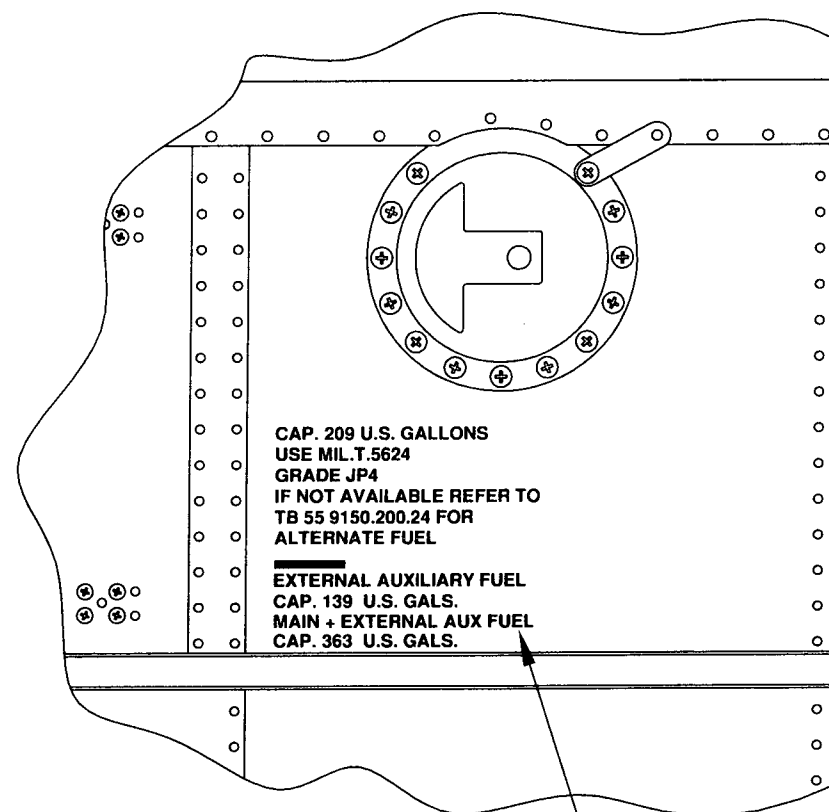
DETAIL - E
VIEW LOOKING AT UPPER L/H
FWD UPPER ATTACH FITTING,
FS 84.5
(SEE DETAIL G)



DETAIL - H
VIEW LOOKING AT UPPER R/H
FWD UPPER ATTACH FITTING
FS 84.5
(SEE DETAIL G)

ORIGINAL DATE (MO-DA-YR) 04-20-95		 2800 TEMPLE HEIGHTS DR. OCEANVIEW, CA 92650-3512 (714) 724-0300			
DRAWN BY T. HARVILLE					
DRAWING APPROVAL					
CONTRACT No.		FUEL TANK INSTALLATION			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: 2 PLACE DECIMALS ± .03 3 PLACE DECIMALS ± .010 ANGLES ± .5°		SIZE B	CAGE CODE 07MZ6	DWG. No. 41228-000-004	REV D
SCALE NONE		SHEET 5 of 6			

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



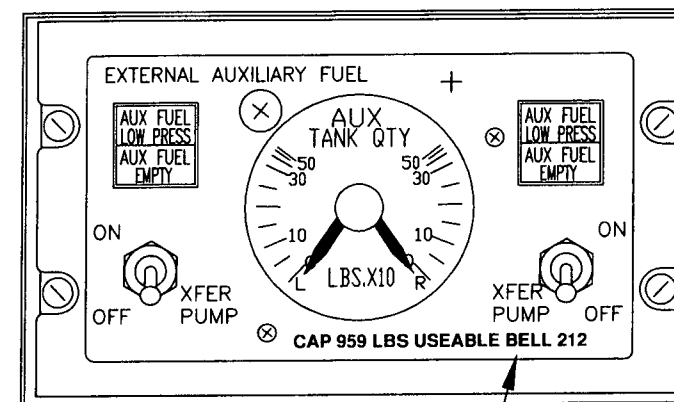
PRIMARY LOCATION OF DECAL
P/N 41228-301-001-XXX

DECAL BELL 205/212
ITEM #54 OR ITEM #55
PROVIDES CONTRAST FOR BACKGROUND COLOR

DECAL BELL 412 S/N 33108 & SUB.
ITEM #52 OR ITEM #53
PROVIDES CONTRAST FOR BACKGROUND COLOR

DECAL BELL 412 S/N 33001-33107
ITEM #50 OR ITEM #51
PROVIDES CONTRAST FOR BACKGROUND COLOR

DETAIL - K



LOCATION OF DECAL
P/N 41228-301-001-XXX

DECAL BELL 412 S/N 33001 & SUB.
ITEM #56

DECAL BELL 205
ITEM #57

DECAL BELL 212 (SHOWN)
ITEM #58

DETAIL - L

ORIGINAL DATE (MO-DA-YR) 04-20-95		 2800 TEMPLE HEIGHTS DR. OCEANVIEW, CA 92050-3012 (714) 724-0300	
DRAWN BY T. HARVILLE	CHECKER		
DRAWING APPROVAL		FUEL TANK INSTALLATION	
CONTRACT No.		SIZE B	CAGE CODE 07MZ6
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: 2 PLACE DECIMALS ± .03 3 PLACE DECIMALS ± .010 ANGLES ± .5°		DWG. No. 41228-000-004	REV D
SCALE NONE		SHEET 6 of 6	